

## **Guillain-Barré Syndrome as a Neurological Complication of Novel COVID-19 Infection: A Case Report and Review of the Literature**

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### **Abstract**

**INTRODUCTION:** The novel coronavirus (COVID-19) is a global pandemic. Although the main clinical manifestation of COVID-19 is respiratory involvement, there is evidence suggesting the neuroinvasive potential of COVID-19. There are limited reports of neurological complications of COVID-19 infection in the literature. Herein, we aim to describe 2 members of a family affected by COVID-19, presenting with ascending paresthesia with the final diagnosis of Guillain-Barré syndrome. **CASE REPORT:** A 38-year-old man presented with a history of ascending paresthesia and bilateral facial droop since 5 days before admission. The medical history was positive for flu-like symptoms affecting all the members of his family. The neurological examination was notable for bilateral peripheral facial paralysis, generalized areflexia, and decreased sensation in distal limbs. The cerebrospinal fluid analysis revealed an albuminocytologic dissociation. In addition, the electromyography-nerve conduction study findings were suggestive of acute axonal-demyelinating polyneuropathy. Meanwhile the patient was treated with a diagnosis of Guillain-Barré syndrome, his 14-year-old daughter presented with a history of progressive paresthesia and weakness. Similar to her father, the paraclinical evaluations were consistent with Guillain-Barré syndrome. Taking into account clinical findings and the outbreak of COVID-19, the suspicion of COVID-19 was proposed. Eventually, on the basis of throat swab samples stand on polymerase chain reaction, the patients were diagnosed with COVID-19. **CONCLUSION:** Our cases revealed the familial occurrence of Guillain-Barré syndrome after COVID-19 infection. The authors emphasize neurological complications of COVID-19.